

WHAT IS CLAIMED IS:

1. A method of managing delivery of data to network applications, the method comprising:
receiving a data packet, the data packet including a service address and a payload;
identifying a plurality of network applications associated with the service address of the data packet, the plurality of network applications associated with the service address including a first network application and a second network application, the first network application being different from the second network application;
sending at least the payload of the data packet to the first network application; and
sending at least the payload of the data packet to the second network application.

2. The method of claim 1, wherein sending at least the payload of the data packet to the first network application occurs at least approximately simultaneously with sending at least the payload of the data packet to the second network application.

3. The method of claim 1, wherein sending at least the payload of the data packet to the first network application occurs at approximately the same time as sending at least the payload of the data packet to the second network application.

4. The method of claim 1, wherein sending at least the payload of the data packet to the second network application is not dependent on receiving a response from the first network application.

5. The method of claim 1, wherein:
receiving a data packet includes receiving a data packet via a first network interface;

sending at least the payload of the data packet to the first network application includes

sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface; and

sending at least the payload of the data packet to the second network application includes

sending at least the payload of the data packet to the second network application via the second network interface.

6. The method of claim 1, wherein:

receiving a data packet includes receiving a data packet via a first network interface;

sending at least the payload of the data packet to the first network application includes

sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface; and

sending at least the payload of the data packet to the second network application includes

sending at least the payload of the data packet to the second network application via a third network interface, the third network interface being different from the second network interface and the first network interface.

7. The method of claim 1, wherein:

sending at least the payload of the data packet to the first network application includes

receiving a first network application response from the first network application; and

sending at least the payload of the data packet to the second network application includes

identifying the second network application based at least in part on the first network application response.

8. The method of claim 1, further comprising:

receiving a first network application response from the first network application on a network interface; and

identifying the second network application based at least in part on the first network application response and the network interface.

9. The method of claim 1, wherein:

receiving a data packet includes receiving a data packet via a first network interface; and

sending at least the payload of the data packet to the first network application includes

identifying the first network application based at least in part on the service

address of the data packet and the first network interface, and

sending at least the payload of the data packet to the first network application via

a second network interface, the second network interface being different from

the first network interface.

10. The method of claim 1, wherein the service address includes a service network address and a service port identifier.

11. The method of claim 1, wherein:

sending at least the payload of the data packet to the first network application is based at least

in part on a stateless identification of the first network application; and

sending at least the payload of the data packet to the second network application is based at

least in part on a stateless identification of the second network application.

12. The method of claim 1, wherein:

sending at least the payload of the data packet to the first network application is based at least in part on a stateful identification of the first network application; and
sending at least the payload of the data packet to the second network application is based at least in part on a stateful identification of the second network application.

13. The method of claim 1, wherein the first network application is a first version of a network application and the second network application is a second version of the network application.

14. The method of claim 13, wherein the first version of the network application is from a first vendor, the second version of the network application is from a second vendor, and the first vendor is different from the second vendor.

15. The method of claim 13, wherein the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

16. The method of claim 1, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and
the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a virtual private network application, a firewall application, a proxy application, a database application, a web switch, and a network security application, and a load balancing application.

17. The method of claim 1, further comprising:

sending the data packet; and

receiving a application response, the application response based at least in part on the data packet.

18. The method of claim 1, further comprising:

receiving a network application response from at least one of the first network application and the second network application;

producing a application response data product based at least in part on the received network application response; and

sending the application response data product.

19. A method of processing one or more units of data, the method comprising:

receiving a first unit of data at a first network interface, the first unit of data including a source address and a service address;

identifying a plurality of data systems based at least in part on the service address, the plurality of data applications including a first data application and a second data application;

sending a second unit of data to the first data application via a second network interface, the second unit of data based at least in part on the first unit of data, the second network interface being different from the first network interface;

sending a third unit of data to the second data application via the second network interface, the third unit of data based at least in part on the first unit of data; and

sending a service response to the source address via the first network interface, the service response based at least in part on the third unit of data.

20. The method of claim 19, further comprising receiving a first data application response from the first data application via the second interface, the first data application response based at least in part on the second unit of data.

21. The method of claim 20, further comprising sending a first data application message to the second data application, the first data application message based at least in part on the first data application response.

22. The method of claim 19, further comprising identifying the first data application based at least in part on the source address.

23. The method of claim 19, wherein the first unit of data includes a service port identifier.

24. The method of claim 23, wherein identifying the first data application is based at least in part on the source address and the service port identifier.

25. The method of claim 24, wherein identifying the first data application is based at least in part on a stateless identification of the first data application.

26. The method of claim 24, wherein identifying the first data application is based at least in part on a stateful identification of the first data application.

27. A method of delivering network application services, the method comprising:

receiving a first data packet via a first network interface, the first data packet including a

service address, a source address, and a first payload;

identifying two or more network applications based at least in part on the service address, the

two or more network applications including a first network application and a second

network application, the first network application being different from the second network application;

sending a second data packet via a second network interface to the first network application, the second data packet including the first payload, the second network interface being different from the first network interface; and

sending a third data packet via a second network interface to the second network application, the third data packet including the first payload.

28. The method of claim 27, wherein:

the first network application has a first network address;

the second network application has a second network address;

sending a second data packet via a second network interface to the first network application

includes determining the first network address based at least in part on the service address; and

sending a third data packet via a second network interface to the second network application

includes determining the second network address based at least in part on the service address.

29. The method of claim 28, wherein

determining the first network address based at least in part on the service address is based at least in part on receiving the first data packet via the first network interface; and

determining the second network address based at least in part on the service address is based at least in part on receiving the first data packet via the first network interface.

30. The method of claim 27, wherein:

the first data packet includes a service port identifier;

sending a second data packet via a second network interface to the first network application

includes identifying the first network application based at least in part on the service port identifier.

31. A system to manage delivery of a network service, the system comprising:

a first network interface to receive a first network packet, the first network packet including a first service address and a payload;

a second network interface to transmit at least the payload of the first network packet to a plurality of network application systems associated with the first service address, the second network interface coupled to the first network interface, the plurality of network application systems including a first network application system and a second network application system, the first network application system being different from the second network application system; and

packet distribution logic to store packet distribution information, the packet distribution information including a service address field to store a service address, the packet distribution information including a plurality of packet distribution entries, each packet distribution entry of the plurality of packet distribution entries including

a source address field to store a source address, and

a destination address to store a destination address.

32. The system of claim 31, wherein each packet distribution entry of the plurality of packet distribution entries includes:

a received interface field to store a received interface identifier; and

a send interface field to store a send interface identifier.

33. The system of claim 31, wherein:

the first network packet includes a first service port identifier, and

each packet distribution entry of the plurality of packet distribution entries includes a service port field to store a service port identifier.

34. The system of claim 31, wherein:

the first network packet includes a first service port identifier, and

each packet distribution entry of the plurality of packet distribution entries includes

a received interface field to store a received interface identifier,

a service port field to store a service port identifier,

a send interface field to store a send interface identifier, and

a send address field to store a send address.

35. The system of claim 34, wherein the send address is a network address of a network application system of the plurality of network application systems.

36. The system of claim 34, wherein the send address is a media access controller address of a network application system of the plurality of network application systems.

37. The system of claim 34, wherein each packet distribution entry of the plurality of packet distribution entries includes a destination system type field to store a destination system type identifier.

38. The system of claim 31, wherein the first network application system is a first implementation of one network application system and the second network application system is a second implementation of the one network application system.

39. The system of claim 31, further comprising a plurality of network application systems, the plurality of network application systems coupled to the second network interface.

40. The system of claim 39, wherein the plurality of network application systems include one or more of an intrusion detection application system, a virus detection application system, a firewall application, a web switch, a network security application, and a load balancing application system.

41. The system of claim 31, wherein:

the first network application system is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application system is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, a database application, and a load balancing application.

42. The system of claim 31, wherein the first network packet uses one or more protocols from one of a TCP/IP network protocol suite and a UDP/IP network protocol suite.

43. The system of claim 42, wherein the one or more protocols includes an IPv4 network protocol.

44. The system of claim 42, wherein the one or more protocols includes an IPv6 network protocol.

45. The system of claim 31, wherein the first network packet uses one or more of a layer 2 protocol, a layer 3 protocol, and a layer 4 protocol.

46. The system of claim 45, wherein the layer 2 protocol is selected from the group consisting of ATM and frame relay.

47. The system of claim 45, wherein the layer 3 protocol is MPLS.

48. The system of claim 31, wherein the first network interface and the second network interface comprise the same network interface.

49. The system of claim 31, wherein the first network interface is different from the second network interface.

50. The system of claim 31, wherein the packet distribution information lacks information that supports stateful processing.

51. The system of claim 31, wherein the packet distribution information includes information that supports stateful processing.

52. The system of claim 31, wherein the packet distribution information consists essentially of information that supports stateless processing.

53. A system to manage delivery of a network service, the system comprising:

a processor;

a first network interface to receive a data packet, the first network interface coupled to the processor, the data packet including a service address and a payload;

TO 9180-1600-0000

a second network interface to transmit at least the payload of the data packet to a plurality of network application systems associated with the service address, the second network interface coupled to the processor, the plurality of network application systems including a first network application system and a second network application system, the first network application system being different from the second network application system;

a memory, the memory coupled to the processor, the memory storing a plurality of instructions to be executed by the processor, the plurality of instructions including instructions to:

identify the plurality of network application systems associated with the service address;

send at least the payload of the data packet to the first network application system via the second network interface; and

send at least the payload of the data packet to the second network application system via the second network interface.

54. The system of claim 53, wherein:

the first network application system has a first network address;

the second network application system has a second network address;

the instructions to send at least the payload of the data packet to the first network application via the second network interface include instructions to determine the first network address based at least in part on the service address; and

the instructions to send at least the payload of the data packet to the second network application via the second network interface include instructions to determine the second network address based at least in part on the service address.

55. The system of claim 53, wherein the data packet includes a service port identifier;

56. The system of claim 55, wherein the instructions to send at least the payload of the data packet to the second network application via the second network interface include instructions to identify the second network application system based at least in part on the service port identifier.

57. A system to manage delivery of a network service, the system comprising:
means for receiving a data packet, the data packet including a service address and a payload;
means for identifying a plurality of network applications associated with the service address of the data packet, the plurality of network applications associated with the service address including a first network application and a second network application, the first network application being different from the second network application;
means for sending at least the payload of the data packet to the first network application; and
means for sending at least the payload of the data packet to the second network application.

58. The system of claim 57, wherein:
the means for receiving a data packet includes means for receiving a data packet via a first network interface;
the means for sending at least the payload of the data packet to the first network application includes means for sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface; and

the means for sending at least the payload of the data packet to the second network

application includes means for sending at least the payload of the data packet to the second network application via the second network interface.

59. The system of claim 57, wherein:

the means for sending at least the payload of the data packet to the first network application includes means for receiving a first network application response from the first network application; and

the means for sending at least the payload of the data packet to the second network application includes means for identifying the second network application based at least in part on the first network application response.

60. The system of claim 57, further comprising:

means for receiving a first network application response from the first network application on a network interface; and

means for identifying the second network application based at least in part on the first network application response and the network interface.

61. The system of claim 57, wherein:

the means for receiving a data packet includes means for receiving a data packet via a first network interface; and

the means for sending at least the payload of the data packet to the first network application includes

means for identifying the first network application based at least in part on the service address of the data packet and the first network interface, and

means for sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

62. The system of claim 57, wherein the service address includes a service network address and a service port identifier.

63. The system of claim 57, wherein:

the means for sending at least the payload of the data packet to the first network application includes means for stateless identification of the first network application; and the means for sending at least the payload of the data packet to the second network application includes means for stateless identification of the second network application.

64. The system of claim 57, wherein:

the means for sending at least the payload of the data packet to the first network application includes means for stateful identification of the first network application; and the means for sending at least the payload of the data packet to the second network application includes means for stateful identification of the second network application.

65. The system of claim 57, wherein the first network application is a first version of a network application and the second network application is a second version of the network application.

66. The system of claim 65, wherein the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

67. The system of claim 57, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, a database application, and a load balancing application.

68. A process to manage delivery of a network service, the process comprising:

a step for receiving a data packet, the data packet including a service address and a payload;

a step for identifying a plurality of network applications associated with the service address of the data packet, the plurality of network applications associated with the service address including a first network application and a second network application, the first network application being different from the second network application;

a step for sending at least the payload of the data packet to the first network application; and

a step for sending at least the payload of the data packet to the second network application.

69. The process of claim 68, wherein:

the step for receiving a data packet includes a step for receiving a data packet via a first network interface;

the step for sending at least the payload of the data packet to the first network application includes a step for sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface; and

the step for sending at least the payload of the data packet to the second network application includes a step for sending at least the payload of the data packet to the second network application via the second network interface.

70. The process of claim 68, wherein:

the step for sending at least the payload of the data packet to the first network application includes a step for receiving a first network application response from the first network application; and

the step for sending at least the payload of the data packet to the second network application includes a step for identifying the second network application based at least in part on the first network application response.

71. The process of claim 68, further comprising:

a step for receiving a first network application response from the first network application on a network interface; and

a step for identifying the second network application based at least in part on the first network application response and the network interface.

72. The process of claim 68, wherein:

the step for receiving a data packet includes a step for receiving a data packet via a first network interface; and

the step for sending at least the payload of the data packet to the first network application includes

a step for identifying the first network application based at least in part on the service address of the data packet and the first network interface, and

a step for sending at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

73. The process of claim 68, wherein the service address includes a service network address and a service port identifier.

74. The process of claim 68, wherein:

the step for sending at least the payload of the data packet to the first network application includes a step for stateless identification of the first network application; and the step for sending at least the payload of the data packet to the second network application includes a step for stateless identification of the second network application.

75. The process of claim 68, wherein:

the step for sending at least the payload of the data packet to the first network application includes a step for stateful identification of the first network application; and the step for sending at least the payload of the data packet to the second network application includes a step for stateful identification of the second network application.

76. The process of claim 68, wherein the first network application is a first version of a network application and the second network application is a second version of the network application.

77. The process of claim 76, wherein the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

78. The process of claim 68, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, a database application, and a load balancing application.

79. A computer-readable medium storing a plurality of instructions to be executed by a processor to manage delivery of a network service, the plurality of instructions comprising instructions to:

receive a data packet, the data packet including a service address and a payload;

identify a plurality of network applications associated with the service address of the data packet, the plurality of network applications associated with the service address including a first network application and a second network application, the first network application being different from the second network application;

send at least the payload of the data packet to the first network application; and

send at least the payload of the data packet to the second network application.

80. The computer-readable medium of claim 79, wherein:

the instructions to receive a data packet include instructions to receive a data packet via a first network interface;

the instructions to send at least the payload of the data packet to the first network application include instructions to send at least the payload of the data packet to the first network

application via a second network interface, the second network interface being different from the first network interface; and

the instructions to send at least the payload of the data packet to the second network

application include instructions to send at least the payload of the data packet to the second network application via the second network interface.

81. The computer-readable medium of claim 79, wherein:

the instructions to send at least the payload of the data packet to the first network application

include instructions to receive a first network application response from the first network application; and

the instructions to send at least the payload of the data packet to the second network

application include instructions to identify the second network application based at least in part on the first network application response.

82. The computer-readable medium of claim 79, further comprising instructions to:

receive a first network application response from the first network application on a network interface; and

identify the second network application based at least in part on the first network application response and the network interface.

83. The computer-readable medium of claim 79, wherein:

the instructions to receive a data packet include instructions to receive a data packet via a first network interface; and

the instructions to send at least the payload of the data packet to the first network application include

instructions to identify the first network application based at least in part on the service address of the data packet and the first network interface, and instructions to send at least the payload of the data packet to the first network application via a second network interface, the second network interface being different from the first network interface.

84. The computer-readable medium of claim 79, wherein the service address includes a service network address and a service port identifier.

85. The computer-readable medium of claim 79, wherein:

the instructions to send at least the payload of the data packet to the first network application include instructions to statelessly identify the first network application; and the instructions to send at least the payload of the data packet to the second network application include instructions to statelessly identify the second network application.

86. The computer-readable medium of claim 79, wherein:

the instructions to send at least the payload of the data packet to the first network application include instructions to statefully identify the first network application; and the instructions to send at least the payload of the data packet to the second network application include instructions to statefully identify the second network application.

87. The computer-readable medium of claim 79, wherein the first network application is a first implementation of a network application and the second network application is a second implementation of the network application.

88. The computer-readable medium of claim 87, wherein the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application.

89. The computer-readable medium of claim 79, wherein:

the first network application is selected from the group consisting of an intrusion detection application, a virus detection application, a firewall application, a web switch, a network security application, and a load balancing application; and

the second network application is a different network application selected from the group consisting of an intrusion detection application, a virus detection application, a virtual private network application, a firewall application, a web switch, a network security application, a proxy application, a database application, and a load balancing application.